	Application No.	Applicant(s)
Interview Summary	10/036,140	MCCLELLAN ET AL.
	Examiner	Art Unit	
	Ji-Yong D. Chung	2143	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Ji-Yong D. Chung*.   (3)_____.

(2) *Albert Metrailer*.   (4)_____.

Date of Interview: *04 November 2005*.

Type: a)☒ Telephonic   b)☐ Video Conference
       c)☐ Personal [copy given to: 1)☐ applicant   2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes   e)☒ No.
  If Yes, brief description: _____.

Claim(s) discussed: *1 and 10*.

Identification of prior art discussed: *Rajhalme (Pub. No. US 2004/0107234) and Baudot et al. (Pub. No. US 2002/0107966)*.
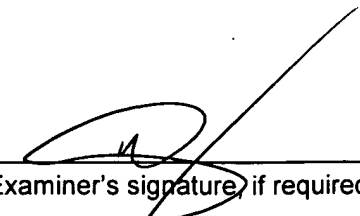
Agreement with respect to the claims f)☐ was reached.   g)☒ was not reached.   h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *The applicant expressed the view that the prior art references do not show the concurrency of multiple address transmissions from one end of the communication path to the other. The Examiner and the applicant's representative decided to continue their discussio via email. No agreement was reached. A transcript of the email exchanged is attached herewith.*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.	Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Chung, David Ji-Yon.

From: Chung, David Ji-Yon.
Sent: Monday, November 21, 2005 11:38 AM
To: 'Al C. Metrailer'
Subject: RE: App. No. 10/036,140 Remarks

Hi,

I just read the proposed claim.

Let me address the issues you raised in your previous email.

>> The present inventors discovered that without changing the way the client is configured,
>>they can solve the problem of failure of one server. The solution is to have two servers with
>> separate addresses, but to provide those two addresses to the client at the same time as
>> if they are simply alternate addresses for one server, emulating the SCTP standard as far
>> as the client is concerned.

It seems to me that the amended claim does not express that the system provides "two addresses to the client at the same time." Note that the "association" is not precisely defined in the specification, at the paragraphs you cited.

If the association is to be understood the process in which addresses are exchanged, as a preceding steps to the ensuing communication between the two end points, then, I would like you to formally stipulate that in the next Amendment, for the record, or to incorporate the point in the claim language.

While I understand the specialized use of word "association" in the specification, I cannot accept the implied definition of the word "association," as the basis upon which to make the distinction between the claimed invention and cited references.

For the phrase "Applicants can be their own lexicographer" to apply here, Applicants must make clear their intention to define the term.

>> Neither reference teaches or suggests building an association that provides two active
>> addresses of two separate computers to the client as alternate addresses for one node,
>> even though there are actually two active computers acting as the one node.

Again, this partly depends on the definition of "association."

>> Rajahalme has multiple active servers with separate addresses, but provides only one
>> address of one server to the client and, if that server fails, must go through the binding
>> process to provide another address of another server to the client.

Yes, however, over the course of communication in Rajhalme or Baudot, there is an "association" such that both addresses are eventually exchanged. In that sense, there is "association" between the end points.

Unless "association" is precisely defined, one can read the following limitation

>> whether the association is configured such that the address of the first node and

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>> the address of the second node are provided to the opposite node as different active
>> addresses for the same node

to mean that the configuration occurs over time, and that in such configuration, the first and
the second addresses are provided in sequence.

Furthermore, note that since association is not precisely defined, it can be construed as
some data structure residing in any of the computers cited in prior art references. The
limitation would also read on "web server" example as well.

-----Original Message-----
From: Al C. Metrailer [mailto:ametrailer@dfw.conleyrose.com]
Sent: Thursday, November 17, 2005 10:29 AM
To: Chung, David Ji-Yon.
Subject: RE: App. No. 10/036,140 Remarks

Good morning, Examiner Chung:

Thank you for your comments and illustrative claim language. I have again reviewed the specification
and references and may now be better able to describe the distinction from the references and provide
amendments to the claims to properly state the distinction.

The invention apparently was conceived as an improvement to the SCTP standard. That standard
controls communications between two endpoints, each endpoint being a single computer, e.g. a client and
a server. But, SCTP improves communications by providing alternate pathways, i.e. provided a backup
pathway in case of failure in one pathway. This is referred to as multihoming which means providing
multiple ports with separate addresses for one computer, e.g. the server. This helps solve the problem of a
pathway failure, but does not solve the problem of failure of the server itself.

The present inventors discovered that without changing the way the client is configured, they can solve
the problem of failure of one server. The solution is to have two servers with separate addresses, but to
provide those two addresses to the client at the same time as if they are simply alternate addresses for one
server, emulating the SCTP standard as far as the client is concerned. For this to work, the remaining
elements, such as synchronizing the data blocks are provided so that the second computer can receive
and respond to messages from the client without delay or building a new association. The client simply
follows the SCTP protocol as if there was a pathway failure, even when there is actually a server failure.

Neither reference teaches or suggests building an association that provides two active addresses of
two separate computers to the client as alternate addresses for one node, even though there are actually
two active computers acting as the one node. Baudot provides only one address to the client and provides
a backup computer that is not active, in that it is not actively connected to the network and must be
activated and have the one addess migrated to it in event of failure of the primary computer. Rajahalme
has multiple active servers with separate addresses, but provides only one address of one server to the
client and, if that server fails, must go through the binding process to provide another address of another
server to the client.

The following is an amended claim 1 that I believe makes this distinction. The other independent claims
can be amended likewise.

1.   A system for communicating between an outside computer and a cluster of
computers comprising a first computer and a second computer, comprising:

            a primary instance of a transmission control protocol resident on the first

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computer;

a primary data structure coupled to the primary instance describing the state of an association defining pathways between the cluster and the outside computer;

a secondary instance of a transmission control protocol resident on the second computer;

a secondary data structure coupled to the secondary instance replicated from the primary data structure;

an intra-cluster network coupling the first computer and the second computer;

a synchronization process coupled to the primary data structure and the secondary data structure replicating the primary data structure to the secondary data structure across the intra-cluster network to synchronize the structures;

wherein the primary instance comprises a first node in the association between the outside computer and the cluster and wherein the outside computer comprises an opposite node;

wherein the secondary instance comprises a second node in the association between the outside computer and the cluster;

wherein the association is configured such that the **address of the** first node and the **address of the** second node **are provided** to the opposite node as different **active** addresses for the same node.

These changes are supported by paragraphs 18 and 19 of the specification where it is stated that building an association includes exchanging a list of addresses.

-----Original Message-----
From: Chung, David Ji-Yon. [mailto:David.Chung2@USPTO.GOV]
Sent: Saturday, November 12, 2005 12:48 AM
To: Al C. Metrailer
Subject: RE: App. No. 10/036,140 Remarks

I have taken a look at the arguments and claim 10 in closer detail.

Claim 10 still reads on Baudot et al., while it does not read on Rajhalme, based on your arguments. Notice that claim 10 does not contain the last limitation of claim 1, which stipulates that the two different addresses appear as one node. The particular limitation helps claim 1 to avoid reading on Baudot.

In the 103 <u>combination</u> of Baudot and Rajhalme, the feature which you have mentioned during the interview and described below in your email as distingusihing claims 1 and 10 from Rajhalme would be present.

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The reason is that the combination of Baudot and Rajhalme would not be performed in the manner that was implied/discussed during our phone interview.

In the Office Action, claims have been interpreted narrowly.

However, they could have been interpreted more broadly as well. For example, claim 1 could have been interpreted to read on a system of web server cluster that incorporates database replication, a very common piece of technology.

To illustrate, claim 1 states ...

A system for ... comprising:

a primary instance ... **[a web server program, which implements HTTP protocol over TCP/IP, is the primary instance]**

a primary data structure ... **[A database or web pages on the first server would satisfy the limitation. After all, they are coupled to the web server program. Note that the "primary instance" (web server program) describes the state of association defining pathways between the cluster and the outside computer]**

a secondary instance ... **[another web server on another computer]**

a secondary data structure ... **[a replicated database, which is common]**

an instra-cluster network ... **[Both servers are in a cluster]**

a synchronization ... **[Think database replication which involves synchronization. They are very common, with regard to web server cluster]**

*wherein the primary instance ...***[web server is one node of two nodes]**

wherein the secondary instance ... **[same thing]**

*wherein the association ...***[In the cluster, both servers appear as different addresses to the same client. The servers appear as the same node, because the servers are accessed by the same network domain name. Of course, each server has its own address.]**

A narrow reading of the claims by the Examiner, in the first Office Action, followed by a broader reading of the claims by the Examiner in the second Office Action in response to the Amendment, tend to produce a long, productive series of correspondence between the Examiner and Applicant's representative.

To advance the prosecution forward substantively, claims need to be amended to avoid reading on references that maybe found based on the potential broader readings of the claims.

For illustration purpose only, I have included the following version of claim 1 that no longer reads on the cited prior art references and on the web server cluster mentioned above.

A system for communicating between an outside cluster of computers and a local cluster of computers, the local cluster comprising a first and a second computer, the system comprising:

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a primary instance of a communication program that follows a transmission control protocol, the primary instance resident on the first computer,

a primary data block in the first computer, the data block coupled to the primary instance, the block being a first instance of a data structure comprising two groups of addresses, two groups defining the opposing ends of a pathway,

a secondary instance of said communication program;

a secondary data block in the second computer, the secondary data block coupled to the secondary instance, the secondary data block being a second instance of said data structure;

an intra-cluster network coupling the first computer and the second computer,

a synchronization process coupled to the primary data block and the secondary data block, the process duplicating contents of the primary data block to the secondary data block across the intra-cluster network to synchronize the blocks;

wherein the primary data block comprises an instance of one of said two groups of addresses of the data structure, the instance of said one group including the address of the first computer and the address of the second computer.

I have not done a search for the preceding example claim; thus, it is possible that the example claim reads on an yet-to-be-discovered prior art references which describe a particular database replication system. One way to overcome such prior art could involve, perhap via a dependent claim, adding a limitation that further describes the transmission protocol (perhaps as having some sort of headers for two groups of addresses).

-----Original Message-----
From: Al C. Metrailer [mailto:ametrailer@dfw.conleyrose.com]
Sent: Monday, November 07, 2005 1:50 PM
To: Chung, David Ji-Yon.
Subject: App. No. 10/036,140 Remarks
Importance: Low

Good morning Examiner Chung:

Thank you for discussing the above referenced case with me on Friday November 4. As you suggested, this email will set out the distinction I see between the present invention and the Rajahalme reference, with particular reference to Claim 10.

Generally, the distinction that we discussed is the number of computer addresses in the association between the opposite node or outside computer, e.g. a client, and a cluster of computers, e.g. servers. In the present invention, the outside computer has in the association two different addresses that it uses as a primary address and a secondary address for sending to the cluster. Both addresses are active, so that if the event of failure of the computer with the primary address, the outside computer can send data to the secondary address without rebuilding an association or rebinding with a new address.

In the specification, paragraph 4 notes that an association is created between the endpoints and is maintained until all data transmission is completed. At paragraph 18 it is noted that the endpoints exchange lists of addresses during initiation of the association. In

paragraph 19 it is noted that heartbeats are sent to the alternate address to be sure it is available if the primary address fails. The alternate address is active. Thus, it is clear that the association includes two different addresses at all times and a new association does not have to be created if the computer at the primary address fails.

The Rajahalme reference relates to an anycast system in which an anycast router receives an anycast message and routes it to one server, usually the closest server, in a group of functionally equivalent servers. One improvement taught by Rajahalme is a process of binding by which the client computer is given the actual address of one server that it can use in completing its session. It appears that the method includes allowing communication between the client and the one server without passing through the router. However, the client binds with, i.e. has the address of, only one server. If that server fails, the client must revert to the anycast address and the router sends the message to a different server and the binding process must be repeated.

As discussed in our telephone conference, method claim 10 appears to clearly include this distinction. In claim 10, a first instance of a transmission control protocol (TCP) is place on a first computer. Another instance of the TCP is placed on the outside computer. A secondary instance of the TCP is placed on a second computer coupled to the first computer (as a backup). The fourth step is to build the association discussed above. The association defines the pathways of communication between the primary instance (on the first computer) and the corresponding instance (on the outside computer) so that the secondary instance (on the second computer) is defined as an alternate address for the primary instance (on the first computer). Thus it is clear that this claim means that two addresses, one for each of the first and second computers are part of the association at the same time. Thus, in event of failure of the first computer, the association does not have to be rebuilt in order for the outside computer to continue its session.

Since building the association is a step in claim 10 and the step requires that there be an alternate address, i.e. a second address, in the association, it appears that claim 10 is distinct from the teachings of Rajahalme which teaches binding, i.e.building an association, with only one address of one server.

The Applicants believe that the other independent claims include the same limitation as to the association and therefore are also patentably distinct from the cited references.

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